



**POLITICS
OF CLIMATE
CHANGE**
There still remain many topics which might cause problems unless all parties come with a greater willingness to work together to solve issues rather than block negotiations for their own petty concerns.

THE thirty-eighth meeting of the Subsidiary Bodies (SB38) of the United Nations Framework Convention on Climate Change (UNFCCC) ended in Bonn, Germany on June 14 with very little progress in preparation for the nineteenth Conference of Parties (COP19) to be held in Warsaw, Poland in November 2013. These two events, COP and SB meetings, are held every year under the UNFCCC with the COP being the high level event with ministers and the SB meeting being a preparatory event with technical negotiators only to prepare matters for the upcoming COP.

The SB meeting is always held in June in Bonn where the UNFCCC Secretariat is located, while the COP moves from one continent to another and is usually held in December each year. COP20 in December 2014 will be held in Lima, Peru and then COP21 in December 2015 will be held in Paris, France. The COP in 2015 in Paris is supposed to be the next big COP



where there are expectations that perhaps a new "Paris Protocol" might be agreed.

However, if the behaviour of some countries in Bonn earlier this month is anything to go by then there is very little hope of making any progress in Warsaw this year. From the first day of the Bonn talks Russia along with a few allies put an extra item on the agenda of the Subsidiary Body on Implementation (SBI) to do with procedural matters, which other countries did not agree with. The SBI president tried his best to resolve the differences but both sides were adamant and the SBI meeting closed without even having adopted its agenda!

Fortunately, the other parts of the negotiations, like the Subsidiary Body on Scientific and Technical Advice (SBSTA) and the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) actually managed to get some things done.

Some of the key outcomes from Bonn are described briefly below.

Adaptation:

All parties agreed that adaptation would have to be a major item in the Paris agreement. A good start was made in Bonn with the launch of the National Adaptation Plans (NAPs)

which the developing countries (starting with the least developed countries) will now carry out. The Nairobi Work Programme on Adaptation under the SBSTA was also agreed for its next phase of activities. So there was significant progress on the topic of adaptation in Bonn.

Equity:

This issue has been a major sticking point up to now, with the developing countries making it a major plank of their negotiations while the developed countries tried to sideline it. In Bonn, there seemed to be a better atmosphere to discuss various aspects of equity with many presentations and discussions. It is a good sign that all parties are now engaging on the issue, although their views still remain quite far apart. Nevertheless, there seems to be some positive movement on this very tricky issue.

Loss and Damage:

This is a new issue in the UNFCCC process and was a major political stumbling block at COP18 in Doha, Qatar in December 2012. It seems that in Bonn the rich countries had come with a much more open mind to listen and try to agree on an outcome in Warsaw and avoid the kind of confrontation that occurred in Doha. Thus, for example, Norway held a workshop with negotiators from developing countries to try to reach common understanding. Sweden plans to host another workshop in Stockholm prior to COP19 in November in Warsaw. Thus, it seems that progress might be possible in Warsaw on this contentious topic.

Finance:

As always the biggest sticking point in the climate change negotiations remains money.

Even though that was not the primary topic of the Bonn meeting, it nevertheless loomed large over the talks. The Green Climate Fund (GCF) is taking time to get up and running and the Fast Start Funding (FSF) of \$30 billion promised from 2010 to 2012 is over with nothing replacing it until the promised long-term finance of \$100 billion per year from 2020 onwards. What happens between 2013 and 2020 is totally unclear.

Bangladesh's role:

Bangladesh, as always, played a significant role within the Least Developed Countries (LDC) Group to which it belongs. Bangladeshi negotiators are spokespersons for both LDC Group as well as the larger group of all developing countries on some specific topics. A number of Bangladeshi experts also held a major side event on the topic of Loss and Damage, highlighting the pioneering work being done in Bangladesh both by researchers as well as government. A number of other LDCs expressed interest in learning from the Bangladesh example.

Going to Warsaw:

Thus, going in to Warsaw in November there still remain many topics which might cause problems unless all parties come with a greater willingness to work together to solve issues rather than block negotiations for their own petty concerns. The spirit in which countries approach the meeting in Warsaw will determine whether or not it is likely to succeed.

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Wild weather, warming world

BITTER TRUTH



TODAY, carbon dioxide causes about half the greenhouse effect. Each year, our skies receive 7 (seven) billion tonnes of carbon dioxide from the burning of fossil fuels. This could double over the next century. Global warming was largely triggered by El Niño, caused by minute changes in ocean temperatures. Movement of warmer water into currents that encircle the Pacific disrupted trade winds and weather patterns in half the world.

What El Niño has wrought, some scientists believe, is just a curtain raiser to what can happen on globe-girdling scale as a result of gradual warming of the earth's atmosphere. And that might come because of the steady buildup of some gases, particularly carbon dioxide. The gases trapped in the atmosphere tend to reflect light, gradually warming the earth. Scientists believe that a doubling of emissions would, over the next 50 years, raise the average temperature of the planet's surface by 1.5 to 4.5 degrees Celsius. And that's a frightening prospect for humans and other living creatures.

The oceans have an enormous capacity to absorb carbon dioxide, but even more amazing is the life that came from the oceans and its role in regulating carbon dioxide levels in the atmosphere. The white cliffs of Dover demonstrate the way nature healed the fevers of past greenhouse warming. About 160 million years ago, ocean plankton took carbon dioxide from the atmosphere and used the carbon to make their protective shells of limestone. When plankton died, their shells sank to the ocean bottom, locking the carbon away in mineral deposits that one day would rise from the sea as white cliffs of chalk.

As a warming climate increases plankton breeding, growing communities of small organisms emit more dimethylsulphide (DMS) gas into the air. DMS triggers the formation of usually small water droplets that can reflect more sunlight than ordinary clouds do, thus helping to cool the earth's climate.

These droplets are called aerosols and work as another key component of the earth's atmosphere. They are suspended liquid and solid particles including soot from fires and volcanic eruptions, sea salt, bacteria and viruses. Aerosols affect the earth's energy budget by scattering and absorbing radiation. They exert a cooling effect, because many of the particles tend to prevent radiation from reaching the planet's surface.

Slight changes in temperature may lead to higher ozone levels near the earth's surface. This could significantly increase smog in large cities, and also change the way clouds form and dissipate. Warmer temperatures near the ground

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cause lower clouds to evaporate, letting heat rise further into the atmosphere. As this heated air rises and cools, higher clouds form. But lower clouds usually reflect sunlight back into space while higher clouds tend to absorb more heat. More high clouds mean more heat trapped near the earth's surface -- so small changes of temperature could set off a cycle in which the atmosphere holds more and more heat over time.

Oceans play a great role in regulating the earth's climate. Their fundamental role in climate is based largely on their storage and transport of heat around the globe. Oceans store vast amounts of heat around the globe, much more than the heat stored by the atmosphere. As water is 1,000 times denser than air, it has a heat holding capacity four times that of air. Ocean currents are primary highways for transport of heat around the globe.

The Gulf Stream is a wind-driven surface ocean current originating in the Gulf of Mexico and terminating in Northwest Europe. When water from this warm current evaporates, it warms the air, which is why northwestern European countries enjoy a milder climate than Canada at the same latitude. The driving force between the Gulf Stream and ocean currents is simple physics: in the waters west of Europe, evaporation makes sea water saltier and colder. The dense water sinks and warmer surface water streams in to replace it, providing the current's sustaining pull. Global climate change can seriously disrupt the interaction of warmer and colder masses.

Another possible effect of the continued warming of the oceans is significant rise in sea levels. Melting of polar ice caps is one of the reasons. The major reason, however, is thermal expansion of water. Sea levels have risen over 10 to 15 centimetres in the last hundred years. Continued rise would submerge a few metres or so above the sea level. The

Maldives is only a metre above the sea level, for example. Bangladesh would also lose vast areas in the coastal zone. The study by a body of scientists at IPCC predicts a sea level rise by 3 feet by 2100. It highlights the devastating impact of a world hotter by 4 degrees Celsius (7.2 degrees Fahrenheit) by the end of this century. The carbon dioxide that we have already put in the atmosphere makes it a near certainty that oceans will become steadily more acidic, eventually destroying coral reefs and sea life. Glaciers will continue to melt year by year, eventually threatening water supply in different regions for as much as 25% of the human population.

The balance between energy absorbed by the earth and energy reflected back into space is fundamental in determining how warm or cool the planet becomes. The proportion of radiation reflected away by a surface is called "albedo." Albedo can range between 0 (no reflection) and 1 (complete reflection like a mirror).

The Earth's average albedo is 0.31 which means that, overall, the planet reflects 31% of incoming solar radiation back into space. However, forests, deserts, oceans, clouds, snow and ice have different albedos. For example the albedo of forests lies in the range between 0.07 and 0.15, while deserts have an albedo of around 0.3. The albedo of the Earth's surface varies from about 0.1 for the oceans to 0.6 to 0.9 for ice and clouds, which means that clouds, snow and ice are good radiation reflectors while liquid water is not. This is because clouds, snow and ice have multiple layers that reflect radiation, while a body of water reflects only from its surface.

A calm ocean is a poor reflector but when it foams up in the surfline, producing many reflecting surfaces, it becomes white, reflecting most of the light hitting it. In fact, ice and snow have the highest albedos. Some parts of the Antarctic

reflect up to 90% of the incoming solar radiation.

Climate change resulting from change of weather pattern is already having a disastrous effect. Arctic sea ice reached a record minimum in September 2012 and extreme heat waves and drought in the last decade have hit almost all places around the globe more often than ever.

The impact of climate change resulting from weird weather pattern has hit Asian region including Bangladesh most severely. Syed Iqbal Hasnain, professor of Glaciology in Delhi's Jawaharlal Nehru University, saw in early 2002 as he trekked to Gangotri glacier high in the Himalayas that the snout that feeds the Ganga had developed giant fractures and crevices along a 10-km stretch, indicating massive ice melts. The temperature at the time was five degrees Celsius higher than earlier years.

Increases in sea levels and temperatures are not the only possible outcomes. When ice and snow melt, they generally expose a much darker underlying surface. Dark surfaces absorb more heat (have a lower albedo) than shiny surfaces. This suggests the possibility that a small amount of melting could lead to warmer surface, which could melt more ice, warming the surface still further, initiating the positive feedback loop for a "runaway" warming trend.

Living things do not respond to climate, they affect it too. Plants consume carbon dioxide and produce oxygen through photosynthesis. Undeniably true, photosynthesis is a "sink" for around 5 billion tons of carbon every year, by far the strongest mechanism of carbon removal from the atmosphere. But that mechanism is being disrupted because we are clearing forest areas in all parts of the country.

Atmospheric scientist V. Ramanathan at the University of Chicago calculates that the earth's average temperature has risen by 1.8 degree Fahrenheit during this century because of the increase in greenhouse gases. Even without further atmospheric pollution, he estimates that trapped heat from the gases we have already put in our skies will boost global temperatures by another five degrees over 1880 levels in the next century. The IPCC report for the time ahead in this century is quite alarming. It says: "Sea levels could rise by a metre mostly because of melting glaciers and the expansion of water as it warms up. The rise could submerge vast areas of low-lying coastal land including river deltas."

In many parts of the world, the climate emergency has already arrived. An estimated 26 million people have already been displaced by increases in floods, desertification, and drought brought about by climate change upheavals. Noticeably, the sea level rise in the Bay of Bengal and heavy inundation of its coastal areas give some alarming signals for this disaster-ridden country.

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QUOTABLE Quotes

"I claim that human mind or human society is not divided into watertight compartments called social, political and religious. All act and react upon one another."

Mahatma Gandhi

